

# **MAPPING ACTIVITY STATEMENT**

**Greene County, MO**

**August 4, 2003**

## Greene County, Missouri



### Cooperating Technical Partner Mapping Activity Statement

#### Statement # 1 –Digital Flood Insurance Rate Map (DFIRM) Production and Development of Updated Flood Data

In accordance with the Cooperating Technical Partners (CTP) Memorandum of Agreement dated June 6, 2003 between Greene County, Missouri and the Federal Emergency Management Agency (FEMA), Mapping Activity Statement #1 is as follows:

1. **Statement Objective and Scope:** The purpose of this mapping project is to develop Flood Insurance Rate Maps (FIRMs) and Flood Insurance Study (FIS) for Greene County, Missouri. The FIS and DFIRM will be produced in Countywide DFIRM format.

This project will be completed by the Mapping Partners listed below:

Greene County, MO,  
The Mapping Coordination Contractor.

The City of Springfield has submitted revised flood hazard data for Jordan, Galloway and South Creeks to FEMA. This revised data will be incorporated into the county-wide DFIRM after FEMA completes a technical review of the data.

The activities, and who will complete them, are summarized in the table below.

The following sections describe the specific mapping activities associated with this mapping project. Each activity description identifies the responsible Mapping Partners, the Standards that must be met, and resultant map component.

Activity	Greene County	MCC
Activity 1 – Field Surveys and Reconnaissance		
Activity 2 – Topographic Data Development		
Activity 3 – Independent QA/QC of Topographic Data		
Activity 4 –Hydrology		
Activity 5–Independent QA/QC of Hydrology		
Activity 6 – Hydraulics		
Activity 7 – Independent QA/QC of Hydraulics		
Activity 8 – Floodplain Mapping (Detailed Riverine)		
Activity 8A – Floodplain Mapping (Redelineation Using Effective Profiles)		
Activity 8B – Floodplain Mapping (Refine/Establish Zone A)		

Activity 9 – Independent QA/QC of Floodplain Mapping			
Activity 10 – Base Map Acquisition and Preparation	X		
Activity 11 – DFIRM Production (Non-Revised Areas)	X		
Activity 11A – Independent QA/QC of DFIRM Production (Non-Revised Areas)			X
Activity 12 – Merge Effective and Revised Information	X		
Activity 12A – Apply DFIRM Graphic Specifications			X
Activity 12B – Independent QA/QC of DFIRM Graphics			
Activity 13 – Issue Preliminary FIS and FIRM			X
Activity 14 – Post-Preliminary Processing			X

#### **Activity 1 - Field Surveys and Reconnaissance**

The activity is not applicable to this Mapping Activity Statement.

#### **Activity 2 - Topographic Data Development**

The activity is not applicable to this Mapping Activity Statement.

#### **Activity 3 - Independent QA/QC of Topographic Data**

The activity is not applicable to this Mapping Activity Statement.

#### **Activity 4 - Hydrology**

The activity is not applicable to this Mapping Activity Statement.

#### **Activity 5 - Independent QA/QC Review of Hydrologic Analyses**

The activity is not applicable to this Mapping Activity Statement.

#### **Activity 6 – Hydraulic Analyses**

The activity is not applicable to this Mapping Activity Statement.

#### **Activity 7 - Independent QA/QC Review of Hydraulic Analyses**

The activity is not applicable to this Mapping Activity Statement.

#### **Activity 8 – Floodplain Mapping (Detailed Riverine)**

The activity is not applicable to this Mapping Activity Statement.

#### **Activity 8A – Floodplain Mapping (Redelineation Using Effective Profiles and Updated Topographic Data)**

The activity is not applicable to this Mapping Activity Statement.

### **Activity 8B – Floodplain Mapping (Refinement or Creation of Zone A)**

The activity is not applicable to this Mapping Activity Statement.

### **Activity 9 - Independent QA/QC Review of Floodplain Mapping**

The activity is not applicable to this Mapping Activity Statement.

### **Activity 10 - Base Map Acquisition and Preparation**

Responsible Entity: Greene County, MO

Scope: This is a required activity when Activities 8, 8A, 8B, and 11 are performed. This activity consists of obtaining the digital base map for the project. Greene County, MO shall:

- Obtain digital files (raster or vector) of the base map;
- Secure necessary permissions from the map source to allow FEMA's use and distribution of hardcopy and digital map products using the digital base map, free of charge;
- Certify that the digital data meet the minimum standards and specifications that FEMA requires for DFIRM production; and
- Populate the DFIRM database for base map features and applicable data.

Standards: All work conducted under this Activity shall conform to the standards specified for this Activity in Section 5 of this Mapping Activity Statement.

Products: In accordance with the TSDN format described in Section 2, Greene County, MO shall make the following products available to FEMA.

- Written certification that the digital data meet the minimum FEMA standards and specifications; and
- Documentation that FEMA can use the digital base map.

## **Activity 11 - DFIRM Production (Non-Revised Areas)**

Responsible Entity: Greene County, MO

Scope: For all flooding sources except Jordan, Galloway and South Creeks in Springfield, Greene County, MO will convert the effective FIRM/FBFM panels to digital format in conformance with FEMA's DFIRM specifications. Greene County, MO will use the base map acquired under Activity 10 of this Mapping Activity Statement for the conversion. The scope of this Activity covers the digitization of 51 FIRM panels and 15 FBFM panels. Greene County, MO also will incorporate LOMCs issued by FEMA since the current effective FIRM for each affected community. The digital flood theme for the flooding sources specified above will not be digitized as part of this Activity; rather, Greene County, MO will leave these as "holes" in the digital flood theme that will be filled in as part of Activity 12.

As part of the DFIRM production, all non-revised flooding sources will be converted from NVGD 29 to NAVD 88.

Standards: All work conducted under this Activity shall conform to the standards specified for this Activity in Section 5 of this Mapping Activity Statement.

Products: In accordance with the TSDN format described in Section 2, Greene County, MO shall make the following products available to FEMA.

- DFIRM mapping files, in one of the GIS file and database formats specified in FEMA's DFIRM Specifications;
- Metadata files describing the DFIRM data, including the required information shown in the examples shown in FEMA's DFIRM Specifications;
- Complete set of plots of the DFIRM panels showing all unrevised flood hazard information taken from the effective FIRMs and FBFMs at a suitable scale; and
- A QA/QC report that includes a description and the results of all automated or manual quality assurance steps taken during the preparation of the DFIRMs, including a check that the road and floodplain relationship is maintained for all unrevised areas.

## **Activity 11A - Independent QA/QC Review of DFIRM Production (Non-Revised Areas)**

**Responsible Entity:** The Mapping Coordination Contractor

**Scope:** The Mapping Coordination Contractor shall review the DFIRM panels submitted by Greene County, MO under Activity 11 of this Mapping Activity Statement to ensure that the unrevised flood hazard information taken from the effective FIRM and FBFM panels is accurately represented on the DFIRM panels. This work will include, at a minimum, ensuring the following:

- Unrevised flood hazard information shown on the effective FIRM and FBFM panels is completely and accurately captured in the digital files.
- The floodway widths agree with the widths shown in the Floodway Data Table(s) and the results of the hydraulic modeling within a tolerance of 5 percent.
- The distances between cross sections agree with the distances shown in the Floodway Data Table(s) and the results of the hydraulic modeling within a tolerance of 5 percent.
- Road and floodplain relationships are maintained for all unrevised areas.
- DFIRM mapping files are in one of the GIS file and database formats specified in FEMA's DFIRM Specifications and conform to those specifications for content and attribution.
- Metadata files describing the DFIRM data include the required information and follow the examples shown in FEMA's DFIRM Specifications.

**Standards:** All work conducted under this Activity shall conform to the standards specified for this Activity in Section 5 of this Mapping Activity Statement.

**Products:** In accordance with the TSDN format described in Section 2, the Mapping Coordination Contractor shall make the following products available to FEMA.

- A Summary Report that describes the findings of the independent QA/QC review, noting any deficiencies and providing recommendations to resolve them or agreeing with the mapping results; and
- Annotated DFIRM panels with all questions and/or concerns indicated, if necessary.

## **Activity 12 – Merging of Revised and Non-Revised Information**

Responsible Entity: Greene County, MO

Scope: Upon completion of the revised flood hazard data from the City of Springfield, and the Digital FIRM Production activity (Activity 11) for non-revised flooding sources, the digital floodplain data will be merged into a single, updated Digital FIRM. This work will include tie-in of flood hazard information with contiguous communities that were not studied as part of this project. Also, the revised and non-revised Flood Profiles, floodplain boundaries, and regulatory floodway boundaries will be tied-in. Greene County, MO will coordinate with the City of Springfield as necessary to resolve any potential tie-in issues.

Standards: All work conducted under this Activity shall conform to the standards specified for this Activity in Section 5 of this Mapping Activity Statement.

Products: In accordance with the TSDN format described in Section 2, Greene County, MO shall make the following products available to FEMA.

- Digital work maps, with 1% annual chance floodplain boundary delineations, cross sections, BFEs, zone designation labels, and all applicable base map features shown;
- DFIRM mapping files, in one of the GIS file and database formats specified in FEMA's DFIRM Specifications, provided on CD-ROM;
- Metadata files describing the DFIRM data, including the required information shown in the examples shown in FEMA's DFIRM Specifications, provided on CD-ROM;
- Complete set of plots of DFIRM panels showing all detailed flood hazard information at a suitable scale;
- A QA/QC report that includes a description and the results of all automated or manual QA/QC steps taken during the preparation of the DFIRM.

## **Activity 12A – Application of DFIRM Graphic Specifications**

**Responsible Entity:** The Mapping Coordination Contractor

**Scope:** Upon completion of merging of effective and revised floodplain mapping into a single, updated DFIRM (Activity 12), the Mapping Coordination Contractor shall apply the final FEMA DFIRM graphic specifications to the DFIRM mapping files. This work will include adding all required annotation, line patterns, area shading, and map collar information (e.g., map borders, title blocks, legends, notes to user).

**Standards:** All work conducted under this Activity shall conform to the standards specified for this Activity in Section 5 of this Mapping Activity Statement.

**Products:** In accordance with the TSDN format described in Section 2, the Mapping Coordination Contractor shall make the following products available to FEMA.

- DFIRM mapping files in one of the GIS file and database formats specified in FEMA's DFIRM Specifications, provided on CD-ROM;
- DFIRM database files in one of the database formats specified in FEMA's DFIRM Specifications, provided on CD-ROM;
- Metadata files describing the DFIRM data including the required information based on the examples shown in FEMA's DFIRM Specifications;
- Complete set of plots of the DFIRM panels showing all the details at the scale(s) agreed upon in the "Scope of Project;" and
- A QA/QC report that includes a description and the results of all automated or manual quality assurance steps taken during the preparation of the DFIRM.



### **Activity 12B - Independent QA/QC Review of DFIRM Graphics**

The activity is not applicable for this Mapping Activity Statement.

### **Activity 13 – Preparation and Issuance of Preliminary FIS and DFIRM**

**Responsible Entity:** The Mapping Coordination Contractor

**Scope:** This Activity consists of the final preparation, review, and distribution of the Preliminary copies of the FIRM and FIS report for community and public review and comment. The activities to be performed are summarized below.

- ***FIS Report Preparation:*** Unless instructed otherwise by FEMA, the MCC will prepare the revised FIS report in the format of the existing FIS report, revising the report only to reflect current conditions and include updated data tables and flood profiles. At a minimum, the FIS report will include the following: text; cover; vicinity map; data tables; photographs (if available); flood profiles; floodway schematic; and, when necessary, transect schematic and transect location map.
- ***Quality Assurance/Quality Control:*** Final QA/QC review of the FIS report, including all data tables, profiles, and other components of the FIS, as appropriate, and the news release will be conducted. The QA/QC procedures will be consistent with FEMA standards outlined below for this activity.
- ***Discrepancy Resolution:*** The MCC will be responsible for working with the City of Springfield and Greene County who are responsible for performing the activities of this project to resolve discrepancies identified during QA/QC.
- ***Distribution of Preliminary DFIRM and FIS Report:*** The MCC will distribute the preliminary copies of the FIS report and DFIRM to the affected communities, State agencies, and others as identified by FEMA.
- ***News Release and Federal Register Notice Preparation:*** The MCC will prepare the news release notifications of BFE changes. The news release will summarize newly proposed BFEs, modifications to existing BFEs, and any changes to the community's floodplain management ordinances to be NFIP compliant. Upon completion of a 30-day community comment period and/or final meeting with the community, and upon initiation of the 90-day appeal period, the MCC will arrange for and verify that the news release is published in the prominent newspaper(s) with local circulation within each affected community identified by the community and FEMA. The MCC also will arrange for and verify that a similar notice is published in the *Federal Register*.

**Standards:** All work conducted under this Activity shall conform to the standards specified for this Activity in Section 5 of this Mapping Activity Statement.

**Products:** In accordance with the TSDN format described in Section 2, the MCC shall make the following products available to FEMA:

- Six sets of printed preliminary DFIRMs and FIS reports, including all updated data tables and flood profiles for mailing to the CEO of each community, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA;
- Preliminary transmittal letter(s);
- DFIRM mapping files in one of the database formats specified in FEMA's DFIRM Specifications;
- DFIRM database files in one of the database formats specified in FEMA's DFIRM Specifications;
- Metadata files describing the DFIRM data, including the required information as presented in the examples shown in FEMA's DFIRM Specifications;

- A QA/QC report that includes a description and the results of all automated or manual QA/QC steps taken during the preparation of the preliminary copies of the DFIRM and FIS report;
- Documentation showing that the news release(s) was published correctly in accordance with FEMA requirements and that a similar notice was published correctly in the *Federal Register* in accordance with FEMA requirements

## Activity 14 - Post-Preliminary Processing

Responsible Entity: The Mapping Coordination Contractor

Scope: This Activity consists of finalizing the DFIRM and FIS report after the preliminary FIS and DFIRM have been issued for public review and comment. The activities to be performed include:

- *Participating in Public Meetings:* When FEMA holds public meetings to present and discuss the results of this Flood Map Project, Greene County, MO will attend the meetings and assist FEMA in the presentation as required.
- *Resolving Appeals and Protests:* Appeals and protests received during the 90-day appeal period will be reviewed and resolved prior to finalizing the FIRM and FIS report. Greene County, MO will provide support to FEMA in resolving appeals and protests. Activities may include, but not limited to, attending community meetings and assisting FEMA and the Mapping Coordination Contractor in addressing any issues that may arise in resolving appeals and protests from affected communities. For a typical appeal and protest, the following activities will be conducted: initial processing of the appeal/protest, performing a technical review of the appeal/protest, preparing letters to request additional data, performing revised analyses, and preparing a proposed resolution for FEMA's review. The Mapping Coordination Contractor will mail all associated correspondence upon authorization by FEMA.
- *Special Correspondence:* Comments received within the 90-day appeal period (referred to as "special correspondence") will be reviewed, and responses will be drafted by the Mapping Coordination Contractor for FEMA's review. The Mapping Coordination Contractor will also mail the final correspondence upon authorization by FEMA.
- *Revise DFIRMs and FIS Report:* If necessary, the Mapping Coordination Contractor will work with those parties responsible for preparing the DFIRM under Activities 8, 8A, 8B, 11, and 12 to prepare revised preliminary copies of the DFIRMs and FIS report, including all data tables and flood profiles. The Mapping Coordination Contractor will mail all revised preliminary copies of DFIRMs and associated correspondence upon authorization by FEMA.
- *Letter of Final Determination:* the Mapping Coordination Contractor will work with FEMA to establish an effective date for the DFIRM and FIS report, prepare a Letter of Final Determination (LFD) for FEMA review and signature, prepare a final notice for publication in the *Federal Register*, mail the LFD with appropriate enclosures, and coordinate publication of the final notice in the *Federal Register*.
- *GPO Processing:* the Mapping Coordination Contractor will prepare final copies of the DFIRM and FIS report, and provide them to FEMA. This will include preparing camera-ready film negatives of the DFIRM and paper copies of the FIS report, including flood profiles; preparing appropriate paperwork to be included with DFIRM and FIS report materials, including the transmittal letter to the community CEO, the print processing worksheet, the Printing Requisition Form, and the Community Map Action Form; and delivering the final materials and paperwork to FEMA in the format prescribed by FEMA.
- *Archiving Data:* the Mapping Coordination Contractor will package the backup data and correspondence for this Flood Map Project and transmit it to the Engineering Study Data Package Facility.

Standards: All work conducted under this Activity shall conform to the standards specified for this Activity in Section 5 of this Mapping Activity Statement.

Products: In accordance with the TSDN format described in Section 2, the Mapping Coordination

Contractor shall make the following products available to FEMA as required:

- Draft LFD and associated backup data and information for FEMA review;
- Draft Special Correspondence and backup data and information for FEMA review;
- Appeal and Protest resolution letters, and all backup data and information for FEMA review;
- One sets of DFIRM negatives and paper FIS reports, including all updated data tables and flood profiles;
- Paperwork required for printing of DFIRM panels and FIS report;
- Complete DFIRM spatial database; and
- Completed and organized Engineering Study Data Packages.

**3. Technical and Administrative Support Data Submittal:** The Project Team members for this project that have responsibilities for activities included in this Mapping Activity Statement shall comply with the following data submittal requirements:

- All supporting documentation for the activities in this Mapping Activity Statement shall be submitted in accordance with Appendix M, Section M.2.1 of the *Guidelines and Specifications for Flood Hazard Mapping Partners*, prepared by FEMA, dated February 2002 and subsequent revisions. The following table indicates the sections of the TSDN that apply to each activity.

**TSDN—Applicable Sections**

Section of TSDN	Activities													
	1	2	3	4, 4A	5, 5A	6	7	8, 8A, 8B	9	10	11, 11A	12, 12A, 12B	13	14
<b>General Documentation</b>														
Special Problem Reports	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Telephone Conversation Reports	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Meeting Minutes/Reports	X	X	X	X	X	X	X	X	X	X	X	X	X	X
General Correspondence	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Engineering Analyses</b>														
Hydrologic and Hydraulic Analyses	X	X		X	X	X	X							
Section of TSDN	Activities													
	1	2	3	4, 4A	5, 5A	6	7	8, 8A, 8B	9	10	11, 11A	12, 12A, 12B	13	14
Key to Cross-section Labeling and Key to Transect Labeling	X	X				X	X	X	X					
<b>Draft FIS Report</b>				X		X							X	X
<b>Mapping Information</b>		X						X	X	X	X	X	X	X
<b>Miscellaneous Reference Materials</b>	X	X	X	X	X	X	X	X	X	X	X	X	X	X

- If any issues arise that could affect the completion of an activity within the proposed scope or budget, the party responsible for that activity must complete a Special Problem Report (SPR) as soon as possible after the issue is identified and submitted to FEMA. The SPR should describe

the issue and propose possible resolutions.

Additionally, the Mapping Coordination Contractor will be responsible for collecting and maintaining a set of products for all Activities and shall compile a comprehensive TSDN for the entire project.

3. **Period of Performance:** The period of performance will be in accordance with Cooperative Agreement Article II.
4. **Funding/Cost-Sharing:** Funding for this Mapping Activity Statement will be provided by Greene County and FEMA through a cooperative agreement (EMK-2003-CA-3043). The amount provided by each party will be identified in the cooperative agreement budget.
5. **Standards:** Table 5-1 indicates the standards and documentation relevant to this Mapping Activity Statement. Table 5-2 shows the applicable sections of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* for each activity.

Table 5-1 Applicable Standards per Activity

Applicable Standards	Activities													
	1	2	3	4, 4A	5, 5A	6	7	8, 8A, 8B	9	10	11, 11A	12, 12A, 12B	13	14
Guidelines and Specifications for Flood Hazard Mapping Partners, February 2002	X	X	X	X	X	X	X	X	X	X	X	X	X	X
American Congress on Surveying and Mapping (ACSM) procedures	X	X	X											
Global Positioning System (GPS) Surveys: National Geodetic Survey (NGS-58), "Guidelines for Establishing GPS-Derived Ellipsoidal Heights," November 1997	X	X	X											
EM 1000-1-1000, "Photogrammetric Mapping," March 31, 1993	X	X	X											
EM 1110-2-1003, "Hydrographic Surveys," October 31, 1994	X		X											
Numerical Models Accepted by FEMA for NFIP Usage, January 11, 2002				X	X	X	X							
Content Standards for Digital Geospatial Metadata (Federal Geographic Data Committee, 1998)		X	X					X	X	X	X	X	X	X
Document Control Procedures Manual dated October 1993.													X	X



**Table 5-2 Mapping Activities and Applicable Sections of Guidelines and Specifications for Flood Hazard Mapping Partners**

<b>Activity Number</b>	<b>Task Description</b>	<b>Applicable Volume, Section/Subsection, and Appendix of Guidelines and Specifications</b>
1	Field Surveys and Reconnaissance	Volume 1, Sections 1.2, 1.3, 1.4 (specifically Subsection 1.4.2.1) Appendix A, Sections A.5, A.6, A.7, and A.8 Appendices B, C, and M
2	Topographic Data Development	Volume 1, Section 1.4 (specifically Subsection 1.4.2.1) Appendix A, Sections A.2 and A.3 Appendix M
3	Independent QA/QC of Topographic Data	Volume 1, Section 1.4 (specifically Subsections 1.4.1 and 1.4.2.1) Appendix A, Sections A.2, A.3, A.7 (specifically Subsection A.7.5), and A.8 (specifically Subsection A.8.6) Appendix M
4	Hydrology	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.4) Appendix C, Sections C.1 and C.7 Appendices E, F, G, H, and M
5	Independent QA/QC Review of Hydrology	Volume 1, Section 1.4 (specifically Subsection 1.4.1) Appendix C, Section C.2 Appendices E, F, G, H, and M
6	Hydraulic Analyses	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.4) Appendix A, Section A.4 (specifically Subsection A.4.7) Appendix C, Sections C.3 and C.7 Appendices B, E, F, G, H, and M

Task Number	Task Description	Applicable Volume, Section/Subsection, and Appendix of Guidelines and Specifications
7	Independent QA/QC Review of Hydraulic Analyses	Volume 1, Section 1.4 (specifically Subsection 1.4.1) Appendix A, Section A.4 (specifically Subsection A.4.7) Appendix C, Section C.5 Appendices B, E, F, G, H, and M
8	Floodplain Mapping (Detailed Riverine or Analysis)	Volume 1, Section 1.4 (specifically Subsection 1.4.2.3) Appendix C, Sections C. 4 and C.6 Appendices K, L, and M
8A	Floodplain Mapping (Redelineation Using Effective Profiles and Updated Topographic Data)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.3) Appendices K, L, and M
8B	Floodplain Mapping (Refinement or Creation of Zone A)	Volume 1, Section 1.4 (specifically Subsection 1.4.2.3) Appendix C, Sections C.4 and C.6 Appendices K, L, and M
9	Independent QA/QC Review of Floodplain Mapping	Volume 1, Section 1.4 (specifically Subsections 1.4.1 and 1.4.2.3) Appendix C, Sections C.4 and C.6 Appendices D, K, L, and M
10	Base Map Acquisition and Preparation	Volume 1, Sections 1.3 (specifically Subsection 1.3.1.8) and 1.4 (specifically Subsection 1.4.3) Appendices A and B

**Table 5-2 Mapping Activities and Applicable Sections of Guidelines and Specifications for Flood Hazard Mapping Partners (Cont.)**

**Table 5-2 Mapping Activities and Applicable Sections of Guidelines and Specifications for Flood Hazard Mapping Partners (Cont.)**

<b>Task Number</b>	<b>Task Description</b>	<b>Applicable Volume, Section/Subsection, and Appendix of Guidelines and Specifications</b>
11	DFIRM Production (Non-Revised Areas)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.3 and 1.4.3.2) Appendices K, L, and M
11A	Independent QA/QC Review of DFIRM Production (Non-Revised Areas)	Volume 1, Section 1.4 (specifically Subsection 1.4.3) Appendices K, L, and M
12	Merging of Revised and Non-Revised Information	Volume 1, Section 1.4 (specifically Subsections 1.4.2.3 and 1.4.3.3) Appendices K and L
12A	Application of DFIRM Graphic Specifications	Volume 1, Section 1.4 (specifically Subsection 1.4.3) Appendices K and L
12B	Independent QA/QC Review of DFIRM Graphics	Volume 1, Section 1.4 (specifically Subsection 1.4.3) Appendices K, L, and M
13	Preparation and Issuance of Preliminary FIS and DFIRM	Volume 1, Sections 1.4 (specifically Subsections 1.4.2 and 1.4.3) and 1.5 (specifically Subsection 1.5.1) Appendices J, K, L, and M
14	Post-Preliminary Processing	Volume 1, Section 1.5 Appendices J, K, L, and M

## **6. Schedule and Milestones:**

Monitoring Information for Contracted Studies (MICS) will be used to report progress for this Mapping Activity Statement. For each of the assigned activities, and assigned partner will establish a start date, scheduled completion date, and estimated completion date. The initial schedule will be established within two weeks of funds award, and the schedule progress will be updated no later than 30 days after the end of each quarter. The Regional Project Officer will arrange for the necessary access for designated individuals.

If changes to the schedule are required, the responsible Mapping Partner shall coordinate with FEMA and the other Mapping Partners in a timely manner.

**7. Certification:** The following certifications apply to this Statement of Work (as appropriate):

### **Activity 1 (Field Surveys and Reconnaissance) and Activity 2 (Topographic Data Development)**

- Registered Professional Engineer or Licensed Land Surveyor will certify topographic information, in accordance with 44 CFR 65.5(c).
- Certification of topographic information by the American Society for Photogrammetry and Remote Sensing is also acceptable.

### **Activity 10 (Base Map Acquisition and Preparation)**

- Community official or responsible party will provide written certification that the digital data meet FEMA's minimum standards and specifications.
- Responsible Mapping Partner will provide documentation that the digital base map can be used by FEMA.

### **Activities 8, 8A, and 8B (Floodplain Mapping) and Activity 11 (DFIRM Production – Non-Revised Areas)**

- The DFIRM metadata files will include a description of the horizontal and vertical accuracy of the DFIRM base map and floodplain information.

### **Activity 4 (Hydrology), Activity 6 (Hydraulics), and Activities 8, 8A, and 8B (Floodplain Mapping)**

- Hydrologic and/or hydraulic analyses and data will be certified by a Registered Professional Engineer or Licensed Land Surveyor in accordance with 44 CFR 65.6(f).
- Topographic information will be certified by a Registered Professional Engineer or Licensed Land Surveyor in accordance with 44 CFR 65.5(c).
- Any levee systems to be accredited will be certified in accordance with 44 CFR 65.10(e).

**8. Technical Assistance and Resources:** Greene County may obtain copies of FEMA-issued LOMCs), archived engineering backup data, and data collected as part of the Mapping Needs Assessment Process from the MCC. The MCC may be contacted at 1-877 FEMA MAP (1-877-336-2627). General technical and programmatic information, such as FEMA 265, the Quick-2 computer program, and the MT-2 forms, can be downloaded from FEMA's Flood Hazard Mapping website ([www.fema.gov/mit/tsd/](http://www.fema.gov/mit/tsd/)). Specific technical and programmatic support may be provided through FEMA's MCC; such assistance should be requested through the FEMA MCC Project Officer specified in

Section 11 of this Mapping Activity Statement.


Greene County may also consult with the FEMA Regional Project Officer to request support in the areas of selection of data sources, digital data accuracy standards, assessment of vertical data accuracy, data collection methods or sub-contractors, and GIS-based engineering and modeling training.

**9. Contractors:** Greene County will ensure that procurement of subcontractors as part of this Mapping Activity Statement complies with the requirements of 44 CFR 13.36.

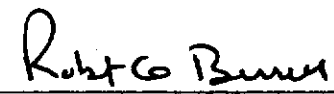
**10. Financial Reporting:** Financial reporting requirements will be in accordance with Cooperative Agreement Articles V & VI.

**10. Points of Contact:** The FEMA Regional Project Officer is Bob Franke, and the CTP Project Manager is Tim Smith or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities. When necessary, the assistance of FEMA's MCC should be requested through the FEMA MCC Project Officer, William Blanton.


Each party has caused this Mapping Activity Statement to be executed by its duly authorized representative.

  
\_\_\_\_\_  
Tim Smith  
Greene County, Missouri

08/15/03  
Date

  
\_\_\_\_\_  
Robert G. Bissell, Director  
Federal Insurance and Mitigation Division  
Federal Emergency Management Agency

8/24/03  
Date

  
\_\_\_\_\_  
William Blanton, Jr.  
Mitigation Division  
Federal Emergency Management Agency

12/2/03  
Date